# OPINIONS AND DECLARATIONS RENDERED BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

VOLUME 12. Part 6. Pp. 191-230, 2 pls.



#### **OPINION 385**

Determination under the Plenary Powers of the method to be adopted in interpreting the nominal species *Coluber sirtalis* Linnaeus, 1758, the Common Garter Snake of the Eastern United States, and approval of the neotype designated for the foregoing species and of that designated for the nominal species *Coluber saurita* Linnaeus, 1766, the Eastern Ribbon Snake of North America

#### LONDON:

Printed by Order of the International Trust for Zoological Nomenclature

and

Sold on behalf of the International Commission on Zoological Nomenclature by the International Trust at its Publications Office 41, Queen's Gate, London, S.W.7

1956

Price Twenty-six Shillings

(All rights reserved)

# INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

# COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 385

#### A. The Officers of the Commission

Honorary Life President: Dr. Karl Jordan (British Museum (Natural History), Zoological Museum, Tring, Herts., England).

President: (Vacant).

Vice-President: Senhor Dr. Afranio do Amaral (Sao Paulo, Brazil).

Secretary: Mr. Francis Hemming (London, England).

#### B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

Senhor Dr. Afranio do Amaral (S. Paulo, Brazil) (Vice-President) (1st January 1944).

Professor J. R. Dymond (*University of Toronto, Toronto, Canada*) (1st January 1944).

Professor J. Chester Bradley (Cornell University, Ithaca, N.Y., U.S.A.) (28th March 1944).

Professor Harold E. Vokes (Johns Hopkins University, Baltimore, Maryland, U.S.A.) (23rd April 1944).

Professor Béla Hankó (Békéscsaba, Hungary) (1st January 1947).

Dr. Norman R. Stoll (Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.) (1st January 1947).

Professor H. Boschma (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) (1st January 1947).

Senor Dr. Angel Cabrera (Eva Peron, F.C.N.G.R., Argentina) (27th July 1948).

Mr. Francis Hemming (London, England) (Secretary) (27th July 1948).

Dr. Joseph Pearson (Tasmanian Museum, Hobart, Tasmania, Australia) (27th July 1948).

Dr. Henning Lemche (Universitetets Zoologiske Museum, Copenhagen, Denmark) (27th July 1948).

Professor Teiso Esaki (Kyushu University, Fukuoka, Japan) (17th April 1950).

Professor Pierre Bonnet (Université de Toulouse, France) (9th June 1950).

Mr. Norman Denbigh Riley (British Museum (Natural History), London) (9th June 1950).

Professor Tadeusz Jaczewski (Department of Systematic Zoology, Warsaw University, Warsaw, Poland) (15th June 1950).

Professor Robert Mertens (Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany) (5th July 1950).

Professor Erich Martin Hering (Zoologisches Museum der Humboldt-Universität zu Berlin, Germany) (5th July 1950).

# **OPINION 385**

DETERMINATION UNDER THE PLENARY POWERS OF THE METHOD TO BE ADOPTED IN INTERPRETING THE NOMINAL SPECIES "COLUBER SIRTALIS" LINNAEUS, 1758, THE COMMON GARTER SNAKE OF THE EASTERN UNITED STATES, AND APPROVAL OF THE NEOTYPE DESIGNATED FOR THE FORE-GOING SPECIES AND OF THAT DESIGNATED FOR THE NOMINAL SPECIES "COLUBER SAURITA" LINNAEUS, 1766, THE EASTERN RIBBON SNAKE OF NORTH AMERICA

RULING:—(1) Under the Plenary Powers it is hereby directed that the nominal species *Coluber sirtalis* Linnaeus, 1758, is to be interpreted by reference to the specimen designated and figured as the neotype of that species by Karl P. Schmidt and Roger Conant in Annexe 1 of the Appendix to the present *Opinion*.

- (2) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* with the Name Numbers severally specified below, the entries so made to be endorsed in the manner shown below:—
  - (a) sirtalis Linnaeus, 1758, as published in the combination Coluber sirtalis, the nominal species so named to be interpreted by reference to the neotype validated under the Plenary Powers under (1) above, the Restricted Locality for this nominal species to be:—"City of Quebec, Quebec Province, Canada" (Name No. 676);
  - (b) saurita Linnaeus, 1766, as published in the combination Coluber saurita, the nominal species so named to be interpreted by reference to the neotype designated and figured by Karl P. Schmidt and Roger Conant in Annexe 2 to the Appendix to the present Opinion, the Restricted Locality for this nominal species to be:— "Vicinity of Charleston, South Carolina, U.S.A." (Name No. 677).

#### I. THE STATEMENT OF THE CASE

On 29th July 1949, Dr. Karl P. Schmidt (Chicago Natural History Museum, Chicago, Illinois, U.S.A.) and Mr. Roger Conant (Philadelphia Zoological Garden, Philadelphia, Pennsylvania, U.S.A.) addressed a preliminary communication to the Commission expressing the view that in the interest of nomenclatorial stability it was desirable that it should use its Plenary Powers for the purpose of ensuring the continued use of the name Coluber sirtalis Linnaeus, 1758, for the Common Garter Snake of the Eastern United States. Following correspondence with the Secretary, the foregoing specialists on 21st March 1950, submitted the following application on this subject:—

Proposed determination under the Plenary Powers of the species to which the trivial name "sirtalis" Linnaeus, 1758, as published in the combination "Coluber sirtalis" (Class Reptilia) is to be applied

#### By KARL P. SCHMIDT

(Chief Curator of Zoology, Chicago Natural History Museum, Chicago, Illinois, U.S.A.)

and

#### ROGER CONANT

(Curator, Philadelphia Zoological Garden, Philadelphia, Pennsylvania, U.S.A.)

Changes of currently used trivial names of North American snakes are proposed by L. M. Klauber, 1948 (Copeia 1948 (No. 1): 1—14). The changes in question are all valid under the International Rules, and the changes are based on an exhaustive examination of both the nomenclatorial and zoological questions at issue.

2. One of the names in question involves two of the most abundant snakes in the North American fauna, which have appeared under their current check-list names (e.g. Stejneger, L., and Thomas Barbour, A check-list of North American Amphibians and Reptiles: 171—172) for more than 100 years and have accumulated very large numbers of references. The double transfer of the great list of references would work an especial hardship on the non-taxonomic zoologist, and would require an explanatory phrase accompanying use of the names in the sense proposed by Klauber.

- 3. We accordingly ask the Commission to use their Plenary Powers to direct that the trivial name sirtalis Linnaeus, 1758, as published in the combination Coluber sirtalis, shall apply to the species described and figured as Tropidonotus sirtalis by J. E. Holbrook in 1842 in North American Herpetology; or, a description of the reptiles inhabiting the United States, Philadelphia, Dobson: 5 vols., illus. (Vol. 4:41, pl. 11), and that "Canada" (restricted to the vicinity of Quebec, see Robert F. Inger, 1946, Copeia, 1946: 254) is to be treated as the type locality of the species, the nomenclature of which is so stabilised.
- 4. We further request that the above name, so stabilised, be added to the Official List of Specific Trivial Names in Zoology, together with the trivial name saurita Linnaeus, 1766, as published in the combination Coluber saurita, the names of these two species being thus placed beyond the range of further dispute. It is to be noted that the currently recognised generic combinations Thamnophis sirtalis and Thamnophis sauritus have been in use since 1892 and 1893 respectively (cf. Stejneger (L.) and Barbour (T.), 1917, A check-list of North American Amphibians and Reptiles (1st ed.): 103).
- 5. The use of the trivial name sirtalis Linnaeus for the common garter snake has been unquestioned for more than 100 years. Of the American herpetologists canvassed on the subject of the present application, the majority give it their support. The specialists in favour of the above request are :-

S. C. Bishop, University of Rochester.

C. M. Bogert, The American Museum of Natural History.

Fred R. Cagle, Tulane University.

A. F. Carr, University of Florida.

Doris M. Cochran, United States National Museum. D. Dwight Davis, Chicago Natural History Museum.

E. R. Dunn, Haverford College.

J. A. Fowler, George Washington University. Helen T. Gaige, 1211, Ferdon Road, Ann Arbor, Michigan.

Howard K. Gloyd, Chicago Academy of Sciences.

Coleman J. Goin, University of Florida. Chapman Grant, 2970, 6th Avenue, San Diego, California.

A. B. Grobman, University of Florida.

Norman Hartweg, Museum of Zoology of Michigan University.

R. F. Inger, Chicago Natural History Museum.

Murray L. Johnson, 1207, Medical Arts Building, Tacoma 2, Washington.

Arthur Loveridge, Museum of Comparative Zoology, Harvard.

M. Graham Netting, Carnegie Museum.

J. A. Oliver, University of Florida. Grace Orton, Carnegie Museum.

C. H. Pope, Chicago Natural History Museum.

Benjamin Shreve, Museum of Comparative Zoology, Harvard. J. R. Slater. College of Puget Sound.

W. H. Stickel, Fish and Wildlife Service.

R. C. Stebbins, Museum of Vertebrate Zoology, University of California.

Those in favour of the change sensu Klauber:-

L. M. Klauber, 233, West Juniper Street, San Diego, California.

C. D. Perkins, Zoological Society of San Diego.

H. M. Smith, University of Illinois.

Not voting:-

G. S. Myers, Stanford University. E. H. Taylor, University of Kansas.

# II. THE SUBSEQUENT HISTORY OF THE CASE

- 2. Registration of the present application: Upon the receipt of the application by Dr. Karl P. Schmidt and Mr. Roger Conant, the question of the use of the Plenary Powers for preserving the specific name *sirtalis* Linnaeus, 1758, as published in the combination *Coluber sirtalis*, as the name for the Common Garter Snake of the Eastern United States was allotted the Registered Number Z.N.(S.) 433.
- **3. Publication of the present application:** The present application was sent to the printer on 4th December 1950 and was published on 20th April 1951 in Part 3 of volume 2 of the *Bulletin of Zoological Nomenclature* (Schmidt & Conant, 1951, *Bull. zool. Nomencl.* **2:** 67—68).
- **4.** Issue of Public Notices: Under the revised procedure prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, Bull. zool. Nomencl. **4**:50—56) Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 20th April 1951 (a) in Part 3 of volume 2 of the Bulletin of Zoological Nomenclature, the Part in which the present application

was published, and (b) also to the other prescribed serial publications. In addition, such Public Notice was given also to certain general zoological serial publications.

- 5. Support received for the present application during the Prescribed Six-Month Waiting Period: The present application at the time of its submission had the support of the twenty-five American herpetologists named in the application (: 68). Following the publication of the present application four communications were received in its support during the Prescribed Six-Month Waiting Period. The specialists concerned, arranged in the order in which they addressed the Commission on this case, were the following:—(1) Dr. Laurence M. Klauber (San Diego, California, U.S.A.); (2) Dr. R. Ph. Dollfus (Muséum National d'Histoire Naturelle, Paris); (3) Dr. Murray L. Johnson (Tacoma, Washington, U.S.A.); (4) Professor Dr. Robert Mertens (Senckenbergische Naturforschende Gesellschaft, Natur-Museum und Forschungs-Institut Senckenberg, Frankfurt a. M., Germany). Of the foregoing, Dr. Murray L. Johnson was among the specialists whose names had been cited in the application as being in favour of the action proposed. The remaining specialists had not previously expressed an opinion on the present case. comments referred to above are reproduced in the following paragraphs.
- 6. Support received from Dr. Laurence M. Klauber (San Diego, California, U.S.A.): On 22nd May 1951, Dr. Laurence M. Klauber (San Diego, California, U.S.A.), the specialist who, as noted in the application, had been the first to point out the need under the Règles for a change in the interpretation of the nominal species Coluber sirtalis Linnaeus, 1758, from that currently accepted, addressed the following letter to the Commission in support of the proposal that the Plenary Powers should be used to preserve the current interpretation of the foregoing nominal species (Klauber, 1951, Bull. zool. Nomencl. 2:351):—

Reference is made to the above-mentioned case, discussed on pages 67—68, Bulletin of Zoological Nomenclature, vol. 2, Pt. 3, and the request for comments appearing in Science, vol. 113, p. 560. Messrs. Karl P. Schmidt and Roger Conant, in their original statement of the case to the Commission, list my name, among others, as being favorable to the change indicated as necessary under the Rules, in my paper

published in *Copeia* in 1948. As a matter of fact, although the change was originally shown by me to be technically necessary, I am not in favor of the change, now that the Commission's Plenary Powers have been modified to include the conservation of trivial names. Therefore, I join with the majority of American herpetologists in recommending that the Commission direct the use of the trivial name *sirtalis* for the common garter snake, and of the trivial name *sauritus* for the northern ribbon snake.

The particularly confusing situation caused by the transference of the Linnean name *sirtalis* from one group of garter snakes (the common group) to another (the ribbon group), as demanded by the old Rules, does not exist in the case of the other necessary changes in Linnean names to which I called attention in 1948. The latter changes should stand.

- 7. Support received from Dr. R. Ph. Dollfus (Muséum National d'Histoire Naturelle, Paris): On 25th June 1951, Dr. R. Ph. Dollfus (Muséum National d'Histoire Naturelle, Paris) addressed a letter to the Commission commenting upon the present and a number of other applications then recently published in the Bulletin of Zoological Nomenclature. The following is the portion of the foregoing letter relating to the present case:—"Je suis pour l'adoption de conserver sirtalis Linnaeus, 1758." (Dollfus, 1952, Bull. zool. Nomencl. 6: 214).
- 8. Support received from Dr. Murray L. Johnson (Tacoma, Washington, U.S.A.): On 9th July 1951, Dr. Murray L. Johnson (*Tacoma*, *Washington*, *U.S.A.*) addressed the following letter to the Commission in support of the present application (Johnson, 1951, *Bull. zool. Nomencl.* 2: 352):—

Here is a good example where the International Commission may act to conserve order in a difficult enough species, taxonomically speaking. I have the highest regard for Dr. Laurence Klauber and believe his scientific reasoning to be without question, but I take serious issue with the propriety of changing a well established name. I am very glad therefore to learn that in this case Dr. Klauber has notified his support for the use of the Plenary Powers to preserve the name sirtalis Linnaeus. The objections to discarding this name are very strong: The original Linnean specimens are not extant; the original Linnean description is certainly not adequate by modern standards and yet under the Code we should apply these modern standards retrospectively to identify the species described by Linnaeus. In as much as there are

hundreds of articles and tens of thousands of catalogued specimens, entries on cards and in catalogues, I implore you to use your good offices permanently to stabilize this point of nomenclature. I feel very strongly that the International Rules of Zoological Nomenclature should be suspended in the case of *Thamnophis sirtalis* (Linnaeus), to retain that name. The reasons put forward for the change are not adequate in modern taxonomy, in my opinion.

9. Support received from Professor Dr. Robert Mertens (Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany): On 25th August 1951, Professor Dr. Robert Mertens (Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M.) addressed the following note to the Commission in support of the present application (Mertens, 1952, Bull. zool. Nomencl. 6: 214):—

Dem Vorschlag von Karl Patterson Schmidt und Roger Conant, den Namen sirtalis Linnaeus für die gewöhnliche Gartersnake beizubehalten, stimme ich zu.

10. Submission of a counter-proposal by Dr. Herndon G. Dowling (University of Michigan Museum of Zoology, Ann Arbor, Michigan, U.S.A.): On 4th August 1951, Dr. Herndon G. Dowling (University of Michigan Museum of Zoology, Ann Arbor, Michigan, U.S.A.) submitted to the Commission the following paper containing a counter-proposal for dealing with the sirtalis problem (Dowling, 1952, Bull. zool. Nomencl. 6: 144—146):—

Proposed use of the Plenary Powers to suppress the trivial name "sirtalis", Linnaeus, 1758, as published in the combination "Coluber sirtalis" (Class Reptilia, Order Squamata, Sub-Order Ophidia)

#### By HERNDON G. DOWLING

(University of Michigan Museum of Zoology. Ann Arbor, Michigan, U.S.A.)

A solution to the present confusion in nomenclature caused by dual usage of the name *Thamnophis sirtalis* (Linnaeus) has recently been proposed by Schmidt and Conant (1951, *Bull. zool. Nomencl.* 2(3): 67—68). However, due to the time elapsed and the resulting confusion which would ensue with a re-reversal of the names *T. sirtalis* and *T. sauritus*, an alternative solution is herein proposed.

#### Historical Summary

- 2. In the Tenth Edition of the *Systema Naturae*, Linnaeus (1758: 222) gave the name *Coluber sirtalis* to a snake collected in Canada by Peter Kalm. This snake was described as having 150 ventrals and 114 caudals, and thus, as pointed out by Klauber (*Copeia*, **1948**: 8—10), certainly refers to the Ribbonsnake of North America.
- 3. In the Twelfth Edition of the Systema Naturae, Linnaeus again described this species (not an unusual occurrence), this time as Coluber saurita (1766: 385), based upon a specimen collected by Alexander Garden in "Carolina". Another specimen collected by him in "Carolina" was the basis for the name Coluber ordinatus Linnaeus (1766: 379); this species was early recognised as a non-striped garter-snake (since shown to be a colour phase of the Common Gartersnake).
- 4. However, Harlan (1827, J. Acad. nat. Sci. Philad. 5: 352, and 1835, Medical and Physical Researches, Philadelphia: 116) tentatively (and mistakenly) applied the name Coluber sirtalis Linnaeus to the striped phase of the Common Gartersnake, saying that it had been "Hitherto not accurately described", and retained the name Coluber ordinatus for another colour phase. The application of the trivial name sirtalis to the Common Gartersnake (striped phase) was questioned by Holbrook in 1840 in his North American Herpetology, Philadelphia (4:91) [Klauber, not seen], and in 1842 (4:43—44) but he used it, nevertheless, believing that Linnaeus would not have first described the Ribbonsnake as C. sirtalis and later as C. saurita, and since the latter name definitely referred to this snake, that the former, therefore, must refer to the Common Gartersnake. The lingering doubts of this application were dispelled by continued usage through the years, everyone apparently basing his work upon that just previous, rather than upon the original descriptions.
- 5. Thus, through many years of usage, the trivial name saurita (now used in the combination Thamnophis sauritus) has become the accepted name for the Ribbonsnake. The Common Gartersnake, however, has had two names applied to it for most of this time (this was not pointed out by Schmidt and Conant). The trivial name ordinatus was correctly applied, but restricted to the non-striped colour phase, until Ruthven (1907, Bull. U.S. Nat. Mus. 61: 176) synonymised it with Thamnophis sirtalis (auct.); the latter name, previously restricted to the striped phase, then became (erroneously) the only one recognised for this species. It retained this position until the appearance of Klauber's work in 1948.
- 6. In the interval between the appearance of Klauber's work (April 22, 1948) and the present date, the name *Thamnophis sirtalis* (Linnaeus) has been used by different authors to refer to both the

Ribbonsnake and the Common Gartersnake. A census of the two American herpetological journals since 1948 is sufficient to demonstrate the present confusion. In the journal of the American Society of Ichthyologists and Herpetologists the name *Thamnophis sirtalis* has been applied to the Common Gartersnake in one paper (*Copeia* 1950: 233—234), to the Ribbonsnake in one (*Copeia* 1951: 79), and in one the intended species cannot be determined from the text (*Copeia* 1950: 229). In the other journal the name is more frequently used, and thus more confused; *Thamnophis sirtalis* was applied to the Common Gartersnake in three cases (*Herpetologica* 5: 86; 6: 71—74, 97—100), to the Ribbonsnake in two (*op. cit.* 5: 17, 89) and one usage is indeterminate (*op. cit.* 5: 119).

7. The name *Thamnophis ordinatus* has been adopted recently for the Common Gartersnake in both journals (*Copeia* 1951: 54, and *Herpetologica* 5: 49—50; 6: 87, 88, 121, 145, and subsequently) as well as in Perkins' recent *Key to the Snakes of the United States* (*Bull. zool. Soc. San Diego* 24) which has wide distribution. To revive the name *Thamnophis sirtalis* for this snake now will merely cause further confusion.

#### Recommendation

- 8. Therefore, it is herein proposed that the International Commission on Zoological Nomenclature:
  - (1) use its Plenary Powers to suppress the trivial name sirtalis Linnaeus, 1758 (described in the combination Coluber sirtalis), which was originally applied to the Ribbonsnake (as shown by Klauber, Copeia 1948: 8—10), but which was mistakenly applied to the Common Gartersnake for a long period of time, and further, to place it on the Official Index of Rejected and Invalid Specific Trivial Names in Zoology);
  - (2) place the trivial names ordinatus Linnaeus, 1766, and saurita Linnaeus, 1766, originally published respectively in the combinations Coluber ordinatus and Coluber saurita (both now recognised as belonging to the genus Thamnophis Fitzinger) on the Official List of Specific Trivial Names in Zoology.

#### Summary and Conclusions

9. It should be pointed out that if the proposal of Schmidt and Conant is followed, it will necessitate the artificial linking of the name of one animal with the original description of another. This would mean that workers could not base their idea of this species upon the original description, thus putting our system of nomenclature into an awkward position. Furthermore, it would prolong the present confusion over the name *Thamnophis sirtalis*. If the present proposal is followed, on the other hand, only the suppression of a single name is necessary, an action for which there is ample precedent.

11. Letter received from Dr. Karl P. Schmidt and Mr. Roger Conant supplementing their application in one respect: On 23rd October 1951, Dr. Karl P. Schmidt and Mr. Roger Conant, the applicants in the present case, addressed the following letter to the Commission in which they supplemented their application by including in it a proposal in regard to the name Coluber saurita Linnaeus, 1766 (Schmidt & Conant, 1952, Bull. zool. Nomencl. 6: 146):—

Supplemental to our recommendation regarding stabilization of the name *Coluber sirtalis* for the common garter snake of North America, and at the suggestion of Dr. J. Chester Bradley, a member of the Commission, we add the following:—

We request the Commission, under their Plenary Powers if need be, to direct that the specific name Coluber saurita Linnaeus, 1766, shall apply to the form described by Blanchard, F. M. (1924, Papers Michigan Academy of Science, Arts and Letters 4:18) as the subspecies sauritus of Thamnophis sauritus. This is the sense of the several editions of the Checklist of North American Amphibians and Reptiles by Leonhard Stejneger and Thomas Barbour, 1933 (Third edition): 124.

12. Extension of the Prescribed Waiting Period to permit of the due consideration of the counter-proposal submitted by Dr. Herndon G. Dowling and of the supplementary proposal submitted by Dr. Karl P. Schmidt and Mr. Roger Conant: In November 1951 consideration was given by the Secretary to the question of the future procedure to be adopted in relation to the present case, having regard to the fact that Dr. Dowling's counter-proposal had not been received until towards the close of the Prescribed Six-Month Waiting Period following the publication in the Bulletin of Zoological Nomenclature of the original Schmidt/Conant proposal, while the supplementary proposal by the latter specialists had not been received until after the close of the foregoing Period. On 6th November 1951, Mr. Hemming, as Secretary, executed a Minute directing (a) that the Dowling counter-proposal and the Schmidt/Conant supplementary proposal be published as soon as possible in the Bulletin of Zoological Nomenclature and (b) that the Prescribed Waiting Period in the present case be extended for a further period of six months to run as from the date on which the foregoing documents were published in the Bulletin. The documents in question were published in Part 5 of volume 6 of the *Bulletin* which appeared on 15th April 1952. Accordingly, under the direction given under the Secretary's Minute of 6th November 1951 referred to above, the date to which the Prescribed Waiting Period was so extended was 15th October 1952.

- 13. Comments received during the portion of the Prescribed Waiting Period following the receipt of the Dowling counterproposal: During the portion of the Prescribed Waiting Period following the receipt of the counter-proposal submitted by Dr. Herndon G. Dowling (paragraph 10 above) nine communications (from ten specialists) were received in the Office of the Commission in regard to the present case. Four (4) of the specialists concerned favoured the Dowling counter-proposal and six (6) the original Schmidt/Conant proposal. The specialists in question were the following:—
  - (1) In support of the Dowling counter-proposal, four (4):
    - Jay M. Savage (Stanford University, Natural History Museum, Stanford, California, U.S.A.)
    - Hobart M. Smith (University of Illinois, Department of Zoology, Urbana, Illinois, U.S.A.)
    - Sherman A. Minton, Jr. (Indiana University Medical Center, Indianapolis, Indiana, U.S.A.)
    - Arnold B. Grobman (University of Florida, School of Arts and Sciences, Department of Biology, Gainesville, Florida, U.S.A.)
  - (2) In support of the Schmidt/Conant proposal and against the Dowling counter-proposal, six (6):
    - A. J. Barton (Highland Park Zoological Gardens, Pitts-burgh, Pennsylvania, U.S.A.)
    - Coleman J. Goin (University of Florida, College of Arts and Sciences, Department of Biology, Gainesville, Florida, U.S.A.)
    - Harold A. Dundee (University of Kansas, Department of Zoology, Laurence, Kansas, U.S.A.)
    - Geo. A. Moore (Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma, U.S.A.)

Bryan P. Glass (Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma, U.S.A.)

Ernst Mayr (then of the American Museum of Natural History, New York).

The communications received from the foregoing specialists are reproduced in the immediately following paragraphs.

14. Support for the Dowling counter-proposal received from Dr. Jay M. Savage (Stanford University, Natural History Museum, Stanford, California, U.S.A.): On 10th January 1952, Dr. Jay M. Savage (Stanford University, Natural History Museum, Stanford, California, U.S.A.) addressed the following letter to the Commission in support of the Dowling counter-proposal (Savage, 1952, Bull. zool. Nomencl. 6: 215):—

I have just finished reading the discussion of the *Thamnophis sirtalis-ordinatus* nomenclatural problem as presented by Dr. Herndon G. Dowling in the latest part of *Copeia*. It is understood that the arguments presented by Dowling are to be considered by the Commission in conjunction with the proposal of Schmidt and Conant.

At this time I should like to put myself on record as favoring the solution of this nomenclatural tangle suggested by Dr. Dowling. Under the circumstances outlined by him in his discussion, the application of T. ordinatus to the common gartersnake of North America and the retention of T. sauritus for the ribbon snake seem most acceptable. The only bar to such an interpretation would lie in the reference which has caused previous workers to refrain from suggestion that a Linnean name might be set aside by the Commission. The conclusions of Schmidt and Conant on this subject are subject to the disadvantage of advocating that a name be associated with a species for which it was never intended and also necessitate the setting aside of a Linnean name.

Dr. Dowling's interpretation is further considered to be the most acceptable solution since it will remove any doubt as to the application of *T. sirtalis* to an American snake, all references being thus associated with the synonymy of either *T. ordinatus* or *T. sauritus*. His conclusions, it is believed, will result in less confusion than if those of Schmidt and Conant were adopted.

15. Support for the Dowling counter-proposal received from Professor Hobart M. Smith (University of Illinois, Urbana, Illinois,

U.S.A.): On 23rd January 1952, Professor Hobart M. Smith (*University of Illinois*, *Urbana*, *Illinois*, *U.S.A.*) addressed the following letter to the Commission in support of the Dowling counter-proposal (Smith, 1952, *Bull. zool. Nomencl.* 6:215—216):—

I should like to record with you my strong approval of the alternative procedure suggested by Dr. H. G. Dowling, modifying the proposals by Schmidt and Conant (1951, *Bull. zool. Nomencl.*, **2**(3): 67—69) relative to *Coluber sirtalis* Linnaeus.

Schmidt and Conant's proposal would require association of the specific trivial name *sirtalis* with a species that the type certainly did not represent. Names have often been suppressed in the past by the Commission for reasons contributing to clarity and stability of nomenclature but, rarely, if ever, has approval been granted for certainly erroneous application of a name to a species. It may perhaps be questioned whether the Plenary Powers of the Commission encompass decisions on matters so obviously zoological as this. In any event, there has been in the past a commendable reluctance by the Commission to deal with any, except strictly parliamentary (as opposed to zoological), problems. Only in most extraordinary circumstances would an exception to this policy be justified. The present case does not thus qualify. The species involved are not commonly dealt with outside of systematic herpetological literature, despite the fact that they are among the most common and widely distributed species of snakes of the country. Therefore, on grounds of precedent for action requested of the Commission, Dowling's proposal is preferable.

If sirtalis is retained as requested by Schmidt and Conant, admittedly in the course of a few years, workers will become correctly confident of the intent of contemporary usage. Never, however, as pointed out by Dowling, can the intent of usage of that name in the interim period (between 1948 and that future time when sirtalis shall have become of universally accepted application) be certain in all cases. The longer the name sirtalis is retained, whether approved by the Commission or not, the longer this interim period of confusion will be. Obviously, the mere existence of the name sirtalis in future literature will contribute to confusion for a number of years to come. Immediate and "Official" (i.e., by action of the Commission) discard of the name will greatly reduce the length of period of confusion. Thus, on grounds of clarity, as well as of precedent, Dowling's proposal is preferable.

The many expressions of opinion favoring Schmidt and Conant's proposal should not, of course, bear significant weight in guiding the Commission's decision, since Dowling's alternative had not then received attention. My own preference, formerly stated to be for retention of Klauber's solution, is here rescinded, and a vote is recorded instead for Dowling's proposal.

16. Support for the Dowling counter-proposal received from Dr. Sherman A. Minton, Jr., Indiana University Medical Center, Indianapolis, Indiana, U.S.A.): On 13th March 1952, Dr. Sherman A. Minton, Jr. (Indiana University Medical Center, Indianapolis, Indiana, U.S.A.) addressed the following letter to the Commission in support of the Dowling counter-proposal (Minton, 1952, Bull. zool. Nomencl. 6: 249):—

I have been asked to express to the International Commission on Zoological Nomenclature my view relative to the problem of nomenclature involved in the dual usage of the name, *Thamnophis sirtalis*, for the North American ribbon snake and for the common garter snake of North America (Reference Number, Z.N.(S.) 433). The proposal of Schmidt and Conant (1951, *Bull. zool. Nomencl.* 2 (3): 67—69) being essentially a return to the status prior to 1948, might well create the least confusion among those non-systematists and workers in other fields who are not familiar with the issues involved. The proposal of Dowling (1951, *Copeia* 1951 (4): 309—310), however, seems more in accord with sound taxonomic procedure and would appear to offer the more desirable course of action.

17. Support for the Dowling counter-proposal received from Dr. Arnold B. Grobman (University of Florida, School of Arts and Sciences, Gainesville, Florida, U.S.A.): On 12th March 1952, Dr. Arnold B. Grobman (University of Florida, School of Arts and Sciences, Gainesville, Florida) addressed the following letter to the Commission in support of the Dowling counter-proposal (1952, Bull. zool. Nomencl. 6: 217):—

Of the two solutions proposed regarding the nomenclature of the common garter snake and the ribbon snake, I prefer that of Dowling to that of Schmidt and Conant.

If there were a possibility of using *sirtalis* for the common garter snake and *sauritus* for the ribbon snake from now on, I would think that would be most desirable. I am not sure however whether this could be accomplished within the structure of the Code.

Both of these snakes are well known in semi-popular literature and the names have been used as I have indicated. Either of the two formal proposals is going to result in continued confusion for a while. 18. Comment by the Secretary on certain observations regarding the scope of the Commission's Plenary Powers contained in Dr. Arnold B. Grobman's comment on the present case: On 6th April 1952, Mr. Hemming, as Secretary, prepared the following note commenting on certain observations regarding the scope of the Commission's Plenary Powers contained in the communication in regard to the present case furnished by Dr. Arnold B. Grobman (Hemming, 1952, Bull. zool. Nomencl. 6: 217—218):—

On the scope of the Plenary Powers bestowed upon the International Commission on Zoological Nomenclature by the International Congress of Zoology, with special reference to the problem presented by the trivial name "sirtalis" Linnaeus, 1758, as published in the combination "Coluber sirtalis" (Class Reptilia)

By FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

In the discussion which has taken place regarding the relative advantages of the proposals submitted (1) by Dr. Karl P. Schmidt and Mr. Roger Conant, and (2) by Dr. Herndon G. Dowling, for stabilising the trivial names to be applied to the Garter Snake and the Ribbon Snake respectively, reference has been made both by Professor Hobart M. Smith (in his letter of 23rd January 1952) and by Professor Arnold G. Grobman (in his letter of 12th March 1952) to doubts which they entertain as to whether the scope of the Plenary Powers granted to the International Commission on Zoological Nomenclature by the International Congress of Zoology is such as would permit the Commission, if it so desired, to approve the solution of the foregoing problem recommended by Dr. Schmidt and Mr. Conant.

2. In order that the issue of the settlement to be reached in regard to the trivial names to be used for the two snakes referred to above may not be obscured by misunderstandings regarding the scope of the Commission's Plenary Powers, it will be convenient here to note what is, in fact, the scope of those Powers. For this purpose we may examine first the Resolution adopted at Monaco in 1913 under which those Powers were originally conferred upon the Commission (see 1943, Ops. Decls. int. Comm. zool. Nomencl. 1(A): 37—40) by the Ninth International Congress of Zoology, and second, the decisions taken in Paris in 1948 by the Thirteenth International Congress of Zoology, when it incorporated the Plenary Powers provisions into the Règles (see 1950, Bull. zool. Nomencl. 4:55—56 (Paris Session, 3rd Meeting, Conclusion 7), 291—293 (Paris Session, 11th Meeting, Conclusion 10).

- 3. The Plenary Powers Resolution of 1913 was granted to the Commission for application "to any given case where, in its [the Commission's] judgment, the strict application of the *Règles* will clearly result in greater confusion than uniformity . . . " Thus, under this Resolution, the Commission was authorised to use the Plenary Powers then conferred upon it only when, in its judgment, certain conditions had clearly been complied with but that no limitation of any kind was placed upon the Commission as to the manner in which it should use its Plenary Powers or as to the Articles of the *Règles* which it might use those Plenary Powers to suspend in any case where it was satisfied that the overriding condition that "the strict application of the *Règles* would clearly lead to greater confusion than uniformity" had been complied with.
- 4. At its Third Meeting during its Paris Session the Commission drew up certain recommendations for changes in the text of the Plenary Powers Resolution but these recommendations were concerned only with mechanics and other procedural matters arising in connection with the use of the Plenary Powers (loc. cit. 4:55-56) and proposed no changes in the portion of the Resolution which actually conferred the Plenary Powers upon the Commission. At the same meeting, the Commission recommended that the Plenary Powers Resolution, amended as proposed, should be incorporated into the Règles (loc. cit. 4:56, Point (2)). These recommendations were later endorsed by the Section on Nomenclature (1950, Bull. zool. Nomencl. 5:5-13). At its Eleventh Meeting during the same Session the Commission agreed upon certain recommendations for the incorporation into the Règles of an Article prescribing the functions of the Commission; the recommendations so adopted included a recommendation that the proposed new Article should prescribe that "the Commission possesses Plenary Powers to suspend, in whole or in part, any Article of the Règles, other than the present Article [i.e. other than the Article defining the functions of the Commission, as applied to the names in any book or to any individual name, where, in its opinion . . . " (here follow the rules in regard to the use by the Commission of its Plenary Powers as agreed upon by the Ninth International Congress of Zoology at Monaco in 1913, as amended by the Paris Congress). This recommendation was endorsed by the Section on Nomenclature (1950, Bull. zool. Nomencl. 5:91-93). All the recommendations referred to above were later approved, with other recommendations, by the Thirteenth International Congress of Zoology in Plenary Session (1950, Bull. zool. Nomencl. 5:131).
- 5. We see therefore that the International Congress of Zoology has now explicitly authorised the International Commission to use its Plenary Powers to suspend the operation, in whole or in part, of any of the Articles of the Règles (other than the Article defining the functions of the Commission itself) in relation to any individual name, where, in its opinion, the strict application of the Règles would clearly result in greater confusion than uniformity.

- 6. The foregoing review of the scope of the Commission's Plenary Powers shows that it would be within the competence of the Commission to use its Plenary Powers for example, to suspend, in part, the provisions relating to type specimens in any individual case where it considered this necessary, in order to prevent greater confusion than uniformity from arising (as the result of the strict application of the normal provisions of the Règles). Subject to its being satisfied on this question, the Commission could therefore, in the individual case on which this problem has been raised, use its Plenary Powers to direct that any published description or figure or any individual specimen which it might so select, should represent, or, as the case might be, should be for the purposes of zoological nomenclature, the lectotype of, and therefore the sole standard for the interpretation of, the nominal species Coluber sirtalis Linnaeus, 1758.
- 7. So far therefore as its Powers are concerned, the International Commission, when it comes to consider the applications submitted to it by Dr. Karl P. Schmidt, jointly with Mr. Roger Conant, and Dr. Herndon G. Dowling, will be free to approve or to reject, as it may think proper, either of the proposals so submitted.
- 19. Support for the Schmidt/Conant proposal received from D. A. J. Barton (Highland Park Zoological Gardens, Pittsburgh, Pennsylvania, U.S.A.): On 4th January 1952, Dr. A. J. Barton (Highland Park Zoological Gardens, Pittsburgh, Pennsylvania, U.S.A.) addressed the following letter to the Commission intimating his support for the Schmidt/Conant proposal as against the Dowling counter-proposal (Barton, 1952, Bull. zool. Nomencl. 6: 214—215):—

With reference to the nomenclatural problem indexed by the Commission as Z.N.(S.) 433, I have examined the proposals tendered by Schmidt and Conant, and by Dowling.

While from a purely systematic standpoint, it would seem preferable to assign the name *ordinatus* to the "Eastern Garter Snake", and *sauritus* to the "Ribbon Snake", I feel that Schmidt and Conant's principle of "continuity" must become a greater force in the resolution of nomenclatural problems. Indeed, it would seem essential that this rule be given precedence if systematics are to be saved from the utter confusion which the Rules were originally formulated to circumvent.

In any tabulation of opinions which the Commission may be pleased to make in guiding it to a decision in this matter, I request that I be listed as favoring the name *Thamnophis sirtalis* auctorum, sensu Stejneger and Barbour, 1943; and the name *Thamnophis sauritus* auctorum, sensu Stejneger and Barbour, 1943. I further request that this specific opinion be generalised as a vote in favor of the continuity

principle in future problems of a similar nature which may be referred to the Commission for an official *Opinion*.

20. Re-affirmation by Dr. Coleman J. Goin (University of Florida, College of Arts and Sciences, Gainesville, Florida, U.S.A.) of support for the Schmidt/Conant proposal: On 11th March 1952, Dr. Coleman J. Goin (University of Florida, College of Arts and Sciences, Gainesville, Florida, U.S.A.), who, it will be recalled from the application originally submitted by Dr. Schmidt and Mr. Conant (paragraph 1 of the present Opinion), was one of the initial supporters of that application, addressed a letter to the Commission re-affirming his support for that proposal as against the Dowling counter-proposal (Goin, 1952, Bull. zool. Nomencl. 6: 216):—

Since I affirmed my position in favor of the petition submitted to the Commission by Karl P. Schmidt and Roger Conant (Commission's reference Z.N.(S.) 433), Mr. Herndon Dowling has made a subsequent proposal to suppress the trivial name *sirtalis*.

As the Garter Snake is perhaps the best known snake in the eastern United States and as it has been known as *sirtalis* for over a hundred years, I think it would be exceedingly unwise to change its name. I am therefore writing to re-iterate my stand in favor of the proposal by Schmidt and Conant. I am not in favor of the proposal by Dowling.

21. Support for the Schmidt/Conant proposal received from Dr. Harold A. Dundee (University of Kansas, Department of Zoology, Lawrence, Kansas, U.S.A.): On 18th March 1952, Dr. Harold A. Dundee (University of Kansas, Department of Zoology, Lawrence, Kansas, U.S.A.) addressed the following letter to the Commission intimating his support for the Schmidt/Conant proposal as against the Dowling counter-proposal (Dundee, 1952, Bull. zool. Nomencl. 6: 249):—

It has been suggested by Mr. Herndon Dowling that the various herpetologists contact you with reference to nomenclatorial action on the name *Thamnophis sirtalis* (Linnaeus) (Commission's reference Z.N.(S.) 433).

It is the opinion of this worker that continuity is more significant than priority in the above case. It is therefore my wish that the proposal of Schmidt and Conant be accepted.

22. Support for the Schmidt/Conant proposal received jointly from Dr. Geo. A. Moore and Dr. Bryan P. Glass (Oklahoma

Agricultural and Mechanical College, Stillwater, Oklahoma, U.S.A.): On 22nd April 1952, Dr. Geo. A. Moore and Dr. Bryan P. Glass (Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma, U.S.A.) addressed the following joint letter to the Commission in support of the Schmidt/Conant proposal as against the Dowling counter-proposal (Moore & Glass, 1952, Bull. zool. Nomencl. 6: 250):—

As members of the American Society of Ichthyologists and Herpetologists, we favor the proposal of Schmidt and Conant over that of Dowling regarding the status of the names *Thamnophis sirtalis* (Linnaeus) and *Thamnophis sauritus* (Linnaeus).

23. Support for the Schmidt/Conant proposal received from Dr. Ernst Mayr (then of the American Museum of Natural History, New York): On 27th May 1952, Dr. Ernst Mayr (at that time of the American Museum of Natural History, New York) addressed to the Commission a letter commenting upon a number of then current applications, including that relating to the present case. The following is the portion of the foregoing letter in which Dr. Mayr commented upon, and intimated his support for, the proposal submitted by Dr. Schmidt and Mr. Conant:—

... With respect to the discussion on the name Coluber sirtalis (Z.N.(S.) 433), I feel that discussions of Linnean names usually neglect the fact that Linnaeus repeatedly considered himself as the first reviser of his own work in the later editions of the Systema. I have pointed this out in connection with the name Turdus musicus in the next issue of the Ibis. In this case, however, it seems to me that except for the recent proposal of Klauber, which has been withdrawn by Klauber himself, the name of the Eastern Garter Snake of North America has been so universally sirtalis that any other action but to place this name on the Official List would be unsettling . . . .

24. Arrangements made by the Secretary for the submission of the present case to the Commission for decision: Following the close of the Prescribed Waiting Period, as extended to 15th October 1952 by the direction given in the Minute executed by the Secretary on 6th November 1951, Mr. Hemming prepared two documents (styled "Sheet No. 1" and "Sheet No. 2" respectively) for submission to the Commission simultaneously

with the Voting Paper to be issued in this case. Sheet No. 1 contained a full enumeration of the comments received in the present case either in favour of the Schmidt/Conant proposal or in favour of the Dowling counter-proposal. Sheet No. 2 contained the drafts of alternative decisions in the present case on which it was proposed that the Members of the Commission should be asked to vote. Alternative "A" contained a draft Ruling giving approval to the Schmidt/Conant proposal; Alternative "B" contained a draft Ruling giving approval to the Dowling counter-proposal. The texts of the alternatives so prepared were as follows:—

#### **ALTERNATIVE "A"**

### (The Schmidt/Conant proposal)

(1) Under the Plenary Powers directions are hereby given (a) that the trivial name sirtalis Linnaeus, 1758, as published in the combination Coluber sirtalis, shall apply to the species described and figured as Tropidonotus sirtalis by J. E. Holbrook in 1842 (North Amer. Herpetology 4:41, pl. 11) and that "Canada, vicinity of Quebec" shall be treated as the type locality of this species, and (b) that the trivial name saurita Linnaeus, 1766, as published in the combination Coluber saurita, shall apply to the form of the said species described by Blanchard (F.M.) in 1924 (Papers Mich. Acad. Sci. Arts Letters 4:18) as the nominotypical subspecies of Thamnophis sauritus (Linnaeus). (2) The trivial names (i) sirtalis Linnaeus, 1758, as published in the combination Coluber sirtalis, as defined in (1) (a) above under the Plenary Powers and the trivial name saurita Linnaeus, 1766, as published in the combination Coluber saurita, as defined in (1) (b) above under the Plenary Powers, are hereby added to the Official List of Specific Trivial Names in Zoology.

#### **ALTERNATIVE "B"**

# (The Dowling counter-proposal)

(1) Under the Plenary Powers, the trivial name sirtalis Linnaeus, 1758, as published in the combination Coluber sirtalis, is hereby suppressed for the purposes of the Law of Priority but not for

those of the Law of Homonymy. (2) The trivial names ordinatus Linnaeus, 1766, as published in the combination Coluber ordinatus, and saurita Linnaeus, 1766, as published in the combination Coluber saurita, are hereby added to the Official List of Specific Trivial Names in Zoology. (3) The trivial name sirtalis Linnaeus, 1758, as published in the combination Coluber sirtalis, as suppressed under the Plenary Powers under (1) above, is hereby added to the Official Index of Rejected and Invalid Specific Trivial Names in Zoology.

# III. THE DECISION TAKEN BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

25. Issue of Voting Paper V.P.(53)1: On 2nd January 1953, a Voting Paper (V.P.(53)1) was issued in which the Members of the Commission were invited to vote either for, or against, "the proposal relating to the name sirtalis Linnaeus, 1758, as set out in the draft marked "Alternative 'A'" annexed hereto" [i.e. the draft so styled reproduced in paragraph 24 of the present Opinion]. At the same time each Commissioner was asked to sign a statement that he realised "that a vote for "Alternative 'A'" [the Schmidt/Conant proposal] is a vote against "Alternative 'B'" [the Dowling counter-proposal] [the text of which is also given in the paragraph cited above] and that a vote against "Alternative 'A'" is a vote for "Alternative 'B'"."

- 26. The Prescribed Voting Period for Voting Paper V.P.(53)1: As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 2nd April 1953.
- 27. Particulars of the Voting on Voting Paper V.P.(53)1: At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(53)1 was as follows:—
  - (a) Votes had been given in favour of Alternative "A" (the Schmidt/Conant proposal) by the following fifteen (15) Commissioners (arranged in the order in which Votes were received):

Lemche; Hering; Bradley (J.C.); Dymond; Esaki; Vokes; Bonnet; Jaczewski; Riley; Hankó; Stoll; Cabrera; Hemming; Boschma; Mertens;

(b) A Vote had been given in favour of Alternative "B" (rejection of the Schmidt/Conant proposal and acceptance of the Dowling counter-proposal) by one (1) Commissioner:

do Amaral;

(c) Voting Paper not returned, one (1):

Pearson.

28. Declaration of Result of Vote on Voting Paper V.P.(53)1: On 3rd April 1953, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(53)1, signed a Certificate that the votes cast were as set out in paragraph 27 above and declaring that, as the proposal submitted as Alternative "A" had not only received a majority of the votes cast but had also, as required for the

adoption of a proposal involving the use of the Plenary Powers, received not less than two affirmative votes out of every three votes cast, the said proposal had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

29. Designation jointly by Dr. Karl P. Schmidt and Mr. Roger Conant of neotypes for the nominal species "Coluber sirtalis" Linnaeus, 1758, and "Coluber saurita" Linnaeus, 1766, and submission by those specialists of a request that the neotypes so designated be taken as the standard for the interpretation of the foregoing species: In May 1954 consideration was given by the Secretary to the form to be adopted for recording the decision taken by the Commission under its Plenary Powers in its vote on Voting Paper V.P.(53)1 for the purpose of determining the taxa to which the names Coluber sirtalis Linnaeus, 1758, and Coluber saurita Linnaeus, 1766, should be held to apply for nomenclatorial purposes. The position in this matter had, subsequent to the taking of the foregoing vote, been modified in certain respects by two decisions by the Fourteenth International Congress of Zoology, Copenhagen, 1953, namely:—(1) the grant of official recognition to neotypes as a category of type specimen; (2) the insertion in the Règles of provisions relating to the designation and restriction of localities for nominal species established, in the first place without a type locality, and, in the second place, with an unduly vague locality. Prior to the Copenhagen Congress the only means at the disposal of the Commission for securing the definitive linking of a given name to a given taxon was to designate, under its Plenary Powers, some published figure or description to be the unique standard by which the nominal species concerned should be interpreted. This was the procedure therefore which the Commission adopted in the present case. This procedure was substantially equivalent to the designation under the Plenary Powers of the specimen so figured or described to be the neotype of the species in question but in certain respects it provided a less satisfactory solution than would the designation of a neotype. For (1) a figure, however good, can never provide so satisfactory a basis of identification as does an actual specimen, and (2) it may happen, as it did happen in the case of Coluber sirtalis Linnaeus, that there is no published figure which is itself suitable for designation by the Commission to be the standard of reference for the species concerned and which, in addition, represents a specimen from the type locality or, as in the case of *sirtalis*, the restricted locality for the species concerned. Correspondence accordingly took place in 1954 between the Secretary and Dr. Schmidt and Mr. Conant. These specialists both took the view that, now that the designation of a neotype was a procedure sanctioned by the Règles, it represented a much more satisfactory method for linking the names Coluber sirtalis Linnaeus and Coluber saurita Linnaeus to particular taxa than did the specification by the Commission of previously published figures to serve as the standard of reference for those species. In due course Dr. Schmidt and Mr. Conant obtained material from localities consistent with the restricted localities of those species. The foregoing specialists thereupon designated a neotype for each of the above species from the material so obtained, the specimens so designated being deposited in the collection of the Chicago Natural History Museum, Chicago, Illinois. Dr. Schmidt and Mr. Conant then submitted an application to the Commission that it should substitute for the decision already taken for the interpretation of the nominal species discussed above a revised decision directing that those species should be interpreted by reference to the neotypes which they had jointly designated. Dr. Schmidt and Mr. Conant furnished descriptions of the two neotypes and at a later stage provided photographs of those neotypes which, with the approval of the International Trust for Zoological Nomenclature, are being reproduced as plates to illustrate the present Opinion. The foregoing supplementary application with the annexed descriptions of the two neotypes is attached to the present *Opinion* as an Appendix.

30. Submission to the Commission of a revised proposal asking that the method to be prescribed in the present case for the interpretation of the nominal species "Coluber sirtalis" Linnaeus, 1758, and "Coluber saurita" Linnaeus, 1766, should be by reference to the neotypes for those species designated jointly by Dr. Karl P. Schmidt and Mr. Roger Conant: Upon the receipt from Dr. Karl P. Schmidt and Mr. Roger Conant of the supplementary application reproduced in the Appendix to the present Opinion in which those specialists asked that the Commission

should prescribe that the nominal species *Coluber sirtalis* Linnaeus, 1758, and *Coluber saurita* Linnaeus, 1766, should be interpreted by reference to the neotypes designated for those species by the applicants instead of (as previously proposed) by reference to specified previously published descriptions and figures, the Secretary prepared on 27th January 1955, a note explaining the developments which had occurred in this case and recommending that approval be given to the revised proposals submitted by Dr. Schmidt and Mr. Conant. This paper, which was submitted to the Commission on 23rd February 1955, was as follows:—

The specific names for the common North American snakes known respectively as the Common Garter Snake and the Eastern Ribbon Snake: proposed formal amendment of the decision taken by the Commission on Voting Paper V.P.(53)1

By FRANCIS HEMMING, C.M.G., C.B.E.,

Secretary to the International Commission on Zoological Nomenclature

The purpose of the present submission is to lay before the Commission a request by Dr. Karl P. Schmidt (*Chicago Natural History Museum*) and Mr. Roger Conant (*The Zoological Garden, Philadelphia*) for a formal amendment of the decision taken by the Commission under its Plenary Powers in 1953 (Voting Paper V.P. (53)1) on an application previously submitted by those authorities for the purpose of stabilising the specific names for two common North American snakes, the Common Garter Snake and the Eastern Ribbon Snake.

2. In essence, the request submitted in this case (Schmidt & Conant, 1951, Bull. zool. Nomencl. 2:67—68) was a very simple one. Up till 1948 the specific name sirtalis Linnaeus, 1758, as published in the combination Coluber sirtalis, was universally applied to the Common Garter Snake and had been so applied for over a hundred years, while the specific name saurita Linnaeus, 1766, as published in the combination Coluber saurita, had similarly for long been applied to the Eastern Ribbon Snake of North America. In 1948, however, Klauber showed that the name sirtalis Linnaeus did not apply to the Garter Snake, being applicable instead to the Ribbon Snake. The acceptance of this bibliographical discovery would have led to a most confusing

transfer of names for two of the commonest and best known snakes in North America, the name *sirtalis* Linnaeus being transferred from the Garter Snake to the Ribbon Snake, some unaccustomed name being applied to the former of these species.

- 3. Schmidt & Conant undertook a canvass of North American herpetologists which showed an overwhelming majority (25 to 3, with two abstentions) in favour of preserving the accepted usage of the name sirtalis Linnaeus. Later Klauber, the specialist who had shown that under the Règles the change in the application of the name sirtalis was necessary and who had been one of the minority of three, changed over to the majority view (Bull. 2:351). While the Schmidt/Conant proposal was under consideration (following its publication in the Bulletin), Dowling put forward an alternative proposal, namely, that the name sirtalis Linnaeus, 1758, should be suppressed under the Plenary Powers, thus preserving the name saurita Linnaeus, 1766, for the Ribbon Snake, and rendering ordinatus Linnaeus, 1766 (Coluber) the oldest available name for the Garter Snake. The period for the public discussion of this case was thereupon extended for a further period of six months to permit of the submission to the Commission of comments by specialists on the Dowling counter-proposal. A few such comments were received and were duly reported to the Commission. At the end of the extended period of public discussion it was evident however that the Schmidt/Conant proposal had by far the greater support among North American herpetologists. When in January 1953 this case was submitted to the Commission for decision, Members of the Commission were invited to choose between two alternatives, Alternative "A" (the Schmidt/Conant proposal) and Alternative "B" (the Dowling counter-proposal). The Commission adopted Alternative "A" by 15 votes to one, with one Commissioner who did not return his Voting Paper.
- 4. It was part of the Schmidt/Conant proposal so adopted by the Commission that in its decision it should insert particulars which would have the effect of prescribing beyond possibility of question the species to which the names sirtalis Linnaeus and saurita Linnaeus should apply. As at that time the concept of neotypes had not been incorporated into the Règles, the object desired could be effected in this, as in previous similar, cases only by the Commission specifying some previously published figure or description to serve as the unique standard of reference for the identification of each of the two nominal species concerned. The proposal submitted by Dr. Schmidt and Mr. Conant—and approved by the Commission—was:—(1) that the nominal species Coluber sirtalis Linnaeus, 1758, be interpreted solely by reference to the specimen figured as Tropidonotus sirtalis by Holbrook (J.E.) in 1842 (N. Amer. Herpet. 4: 41, pl. 11); (2) that the nominal species Coluber saurita Linnaeus, 1766, be interpreted solely by reference to the description given for the nominate subspecies of Thannophis

sauritus (Linnaeus) by Blanchard (F.M.) in 1924 (Papers Mich. Acad. Sci. Arts Letters 4: 18).

5. Subsequent to the recognition by the Fourteenth International Congress of Zoology, Copenhagen, 1953, of the concept of neotypes, Dr. Schmidt and Mr. Conant formed the conclusion that it would be much better in every way that the foregoing species, the types of both of which are lost, should in future be determined by neotypes rather than by reference to previously published figures or descriptions. more especially as the figure previously proposed as the standard of reference for *Coluber sirtalis* Linnaeus (i.e. the specimen figured by Holbrook) was no longer in existence, while Blanchard's description of Coluber saurita Linnaeus previously proposed as the standard of reference for that species was not based upon a single specimen. Dr. Schmidt and Mr. Conant have now designated a specimen to be the neotype of Coluber sirtalis Linnaeus and another specimen to be the neotype of Coluber saurita Linnaeus. There was a slight delay in the selection of these neotypes because it was necessary to obtain for each of the species concerned a suitable specimen obtained in an appropriate locality. On this latter point, it will be recalled that in the case of Coluber sirtalis Linnaeus, the locality for the nominate subspecies was restricted by Inger (1946) to the "vicinity of Quebec". It was necessary therefore in this case to obtain material from the foregoing neighbourhood before a neotype could be designated for this species. The required material was kindly furnished by Mr. E. B. S. Logier of the Royal Ontario Museum of Zoology and Palaeontology. The specimen which has been so designated, which is now in Chicago Natural History Museum, was obtained by G. M. Bureau in 1942 in "Quebec County, City of Quebec". In the case of Coluber saurita Linnaeus, the original proposal, it will be recalled, was that this species should be determined by reference to a plate published in Holbrook's North American Herpetology. In this case therefore Dr. Schmidt and Mr. Conant took the view that the best course would be to designate as the neotype a specimen obtained in the vicinity of Charleston, South Carolina, the place where Holbrook resided and in all probability therefore the place from which was obtained the specimen of this common species which Holbrook figured in his book. It was considered that it would be particularly appropriate that the name Coluber saurita should be perpetuated sensu Holbrook, since it was that author's concept of this species (as also that of Coluber sirtalis Linnaeus) which "was uniformly and unquestionably followed by the herpetologists of the world, and by those of North America in particular, until 1948, when L. M. Klauber demonstrated that Holbrook's interpretation of Coluber sirtalis was at variance with the stated facts derivable from the original description", i.e. until the development of the situation which gave rise to the original application submitted by Dr. Schmidt and Mr. Conant (paragraph 2 above). In due course a suitable specimen of Coluber saurita from Charleston, South Carolina, was provided by Dr. Albert Schwartz of the Charleston Museum, and this specimen

now in Chicago Natural History Museum has been designated as the neotype of the foregoing nominal species. Full particulars of the labels attached to both these neotypes and descriptions of the specimens so designated have been supplied by Dr. Schmidt and Mr. Conant.

- 6. Dr. Schmidt and Mr. Conant ask that the previous decision by the Commission be modified so as to provide that the two species discussed above be interpreted by reference to the neotypes which they have designated and described instead of by reference to the figures and descriptions previously proposed to be adopted as the respective standards of reference for these species. I think that it will be generally agreed that a decision in this sense will be an improvement upon the decision taken in this matter before neotypes were officially recognised in the *Règles* and I recommend that the foregoing proposal be approved.
- 31. Issue of Voting Paper V.P.(O.M.)(55)8: On 23rd February 1954, a Voting Paper (V.P.(O.M.)(55)8) was issued in which each Member of the Commission was asked to vote either for, or against "the proposal submitted by Dr. Karl P. Schmidt and Mr. Roger Conant set out in paragraph 6 of the submission bearing the Number Z.N.(S.)433 circulated by the Secretary simultaneously with the present Voting Paper, namely that the nominal species Coluber sirtalis Linnaeus, 1758, and Coluber saurita Linnaeus, 1766, be interpreted in future by the neotypes therefor which have now been designated by those authors, this decision to replace the decision by the Commission in its vote on Voting Paper V.P.(53)1 (a decision which was taken prior to the incorporation into the Règles of provisions recognising the concept of neotypes) that in future the foregoing nominal species should be interpreted by reference to the figures and descriptions specified in that decision."
- 32. The Prescribed Voting Period for Voting Paper V.P.(O.M.) (55)8: As the foregoing Voting Paper was issued under the One-Month Rule, the Prescribed Voting Period closed on 23rd March 1955.

- 33. Particulars of the Voting on Voting Paper V.P.(O.M.) (55)8: At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(O.M.)(55)8 was as follows:—
  - (a) Affirmative Votes had been given by the following twenty (20) Commissioners (arranged in the order in which Votes were received):1

Riley; Lemche; Stoll; Hering; Vokes; Tortonese; Mayr; Boschma; Hankó; Esaki; Key; Bradley (J.C.); do Amaral; Cabrera; Hemming; Dymond; Kühnelt; Miller; Bonnet; Jaczewski;

(b) Negative Votes, one (1):

Sylvester-Bradley;

(c) On Leave of Absence, three (3):

Holthuis; Mertens; Prantl;

(d) Voting Papers not returned, one (1):

Bodenheimer.

Mr. P. C. Sylvester-Bradley (Sheffield University, Sheffield, England) (12th August 1953)

Dr. L. B. Holthuis (Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands) (12th August 1953)

Dr. K. H. L. Key (Commonwealth Scientific and Industrial Research Organisa-

tion, Canberra, A.C.T., Australia) (15th October 1954)
Dr. Alden H. Miller (Museum of Vertebrate Zoology, University of California, U.S.A.) (29th October 1954)

Doc. Dr. Ferdinand Prantl (Národni Museum v Praze, Prague, Czechoslovakia) (30th October 1954)

Professor Dr. Wilhelm Kühnelt (Zoologisches Institut der Universität, Vienna,

Austria) (6th November 1954)
Professor F. S. Bodenheimer (The Hebrew University, Jerusalem, Israel) (11th November 1954)

Professor Ernst Mayr (Museum of Comparative Zoology at Harvard College, Cambridge, Massachusetts, U.S.A.) (4th December 1954)
Professor Enrico Tortonese (Istituto e Museo di Zoologia della Università di Torino, Torino, Italy) (16th December 1954)

In the period between the issue of Voting Paper V.P.(53)1 and that of Voting Paper V.P.(O.M.)(55)8, Dr. Joseph Pearson retired from the Membership of the Commission. During the same period the following zoologists were elected to be Commissioners :-

- 34. Declaration of Result of Vote on V.P.(O.M.)(55)8: On 12th April 1955, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(O.M.)(55)8, signed a Certificate that the Votes cast were as set out in paragraph 33 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.
- 35. Preparation of the Ruling given in the present "Opinion": On 25th July 1955, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(53)1, as modified by its Vote on Voting Paper V.P.(O.M.)(55)8.
- 36. Original References: The following are the original references for the names placed on the Official List of Specific Names in Zoology by the Ruling given in the present Opinion:—

saurita, Coluber, Linnaeus, 1766, Syst. Nat. (ed. 12) 1(1): 385 sirtalis, Coluber, Linnaeus, 1758, Syst. Nat. (ed. 10) 1: 222

- 37. Family-Group-Name Problem: As the present *Opinion* is concerned only with specific names, no problem concerned with family-group names calls for consideration.
- 38. At the time of the submission of the present application the name applicable to the second portion of a binomen was "trivial name". This was altered to "specific name" by the Fourteenth International Congress of Zoology, Copenhagen, 1953, which at the same time made corresponding changes in the titles of the Official List and Official Index of names of this category. These changes in terminology have been incorporated in the Ruling given in the present Opinion.
- 39. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing

with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

**40.** The present *Opinion* shall be known as *Opinion* Three Hundred and Eighty-Five (385) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Fifth day of July, Nineteen Hundred and Fifty-Five.

Secretary to the International Commission on Zoological Nomenclature

FRANCIS HEMMING

# APPENDIX TO OPINION 385

REQUEST THAT THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE SHOULD DIRECT THAT THE NOMINAL SPECIES "COLUBER SIRTALIS" LINNAEUS, 1758, AND "COLUBER SAURITA" LINNAEUS, 1766, SHOULD BE INTERPRETED BY THE NEOTYPES HERE DESIGNATED BY THE PRESENT AUTHORS INSTEAD OF, AS HITHERTO PROPOSED, BY REFERENCE TO SPECIFIED PREVIOUSLY PUBLISHED FIGURES AND DESCRIPTIONS

# By KARL P. SCHMIDT

(Chicago Natural History Museum, Chicago, Illinois, U.S.A.)

and

#### ROGER CONANT

(Philadelphia Zoological Garden, Philadelphia, Pennsylvania, U.S.A.)

The purpose of the present application is to ask the International Commission on Zoological Nomenclature to approve a modification of the form of the application which in 1952 we submitted asking for the use of the Plenary Powers to preserve (a) the specific name *sirtalis* Linnaeus, 1758, as published in the combination *Coluber sirtalis*, to be the oldest available name for the Common Garter Snake of the Eastern United States and (b) the specific name *saurita* Linnaeus, 1766, as published in the combination *Coluber saurita*, to be the oldest available name for the Eastern Ribbon Snake of North America.

2. At the time when we originally submitted our application in regard to the above names, the *Règles* contained no provisions for the recognition of neotypes and we accordingly asked that the Commission should use its Plenary Powers to secure an unchallengeable interpretation of these nominal species by directing

that they should be interpreted by reference to certain previously published descriptions and figures specified in our application. Since the submission of that application the position has been changed by the decision of the Fourteenth International Congress of Zoology, Copenhagen, 1953, to include in the *Règles* provisions recognising neotypes as a category of type specimen. In these circumstances we are of the opinion that it is desirable that our original proposal should be modified by the substitution of a request that the above species should be interpreted by neotypes instead of by the figures and descriptions previously proposed. Adequate search has been made for the original Linnean types, and it is entirely certain that they are not in existence.

- 3. We have accordingly obtained suitable material for each of these species and from this material we have selected a specimen to be the neotype of each of the species concerned. We attach to this letter descriptions which we have prepared of each of these neotypes. The description of the neotype of *Coluber sirtalis* Linnaeus is given in Annexe 1 and that of *Coluber saurita* Linnaeus in Annexe 2. We annex also photographs of these neotypes which we hope that it will be possible for the International Trust for Zoological Nomenclature to include as plates in the *Opinion* on this case, when rendered by the Commission.
- **4.** In the case of the nominal species *Coluber sirtalis* Linnaeus, 1758, now known as *Thamnophis sirtalis* (Linnaeus), a restricted locality "Vicinity of Quebec" was established in a paper published by Inger in 1946. We have accordingly selected as the neotype of that species a specimen collected in 1942 by G. M. Bureau in the City of Quebec. For this specimen, which is now deposited in the Chicago Natural History Museum, we are indebted to Mr. E. B. S. Logier, of the Royal Ontario Museum of Zoology and Palaeontology.
- 5. The interpretation adopted by John Edwards Holbrook in his four-volume work the *North American Herpetology* for the nominal species *Coluber sirtalis* Linnaeus (now known as *Thannophis sirtalis* Linnaeus)) and *Coluber saurita* Linnaeus (now known

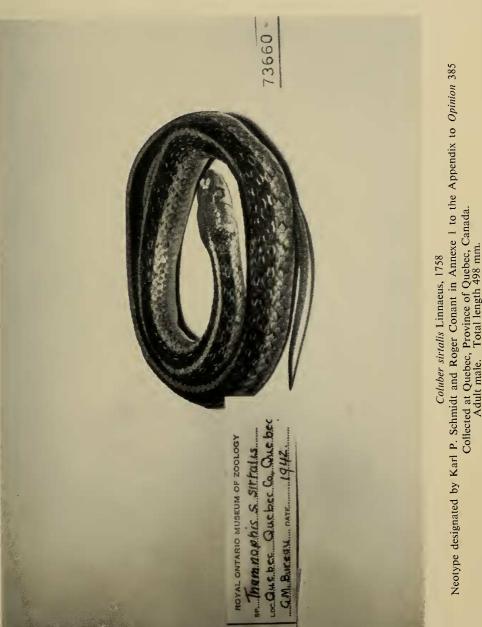
as Thamnophis sauritus (Linnaeus)) was uniformly and unquestioningly followed by the herpetologists of the world, and by those in North America in particular, until 1948 when L. M. Klauber demonstrated that Holbrook's interpretation of Coluber sirtalis was at variance with the stated facts derivable from the original description. It was in order to perpetuate these names sensu Holbrook that we originally asked the Commission to use its Plenary Powers. In now asking that these species should in future be interpreted by the neotypes which we have designated, we have found it necessary, for the reasons explained in paragraph 4 above, to select a Canadian specimen to be the neotype of Coluber sirtalis. In the case however of Coluber saurita we have chosen as the neotype a specimen from the neighbourhood of Charleston, South Carolina, where Holbrook resided while producing the North American Herpetology. For it was from this region that Holbrook almost certainly obtained the specimen of this species which is figured in his North American Herpetology (1st edition, 1840, vol. 4, pp. 87—90, pl. 16). We may be permitted the pious speculation that the neotype which we have selected is the direct descendant of the specimen figured on the plate cited. For this specimen, which is now deposited in the Chicago Natural History Museum, we are indebted to Dr. Albert Schwartz of the Charleston Museum.

6. For the photographs of the two neotypes now designated we are indebted to Isabelle Hunt Conant.

# ANNEXE 1

Description of Neotype of "Coluber sirtalis" Linnaeus, 1758 ("Thamnophis sirtalis sirtalis" (Linnaeus, 1758)), the Eastern Garter Snake of North America

**Description:** An adult male with a total length of 498 mm.; tail length 119 mm; tail 24 per cent. of total length. Rostral



Collected at Quebec, Province of Quebec, Canada. Adult male. Total length 498 mm.



broad, slightly visible from above and notched below for the passage of the tongue. Paired internasals and prefrontals. Frontal longer than wide. Parietals paired, each slightly longer than the frontal. Supraoculars long and narrow. Two nasals, the nostril largely in the anterior nasal. Loreal sub-trapezoidal, about as long as high. One preocular and three postoculars. One anterior temporal; two temporals in the second row. Upper labials 7, the 3rd and 4th entering the orbit; the 5th and 6th the largest; subequal in size. Lower labials 10 on the left side of the head, the 6th largest (on the right side of the head the 2nd and 3rd lower labials are fused together into a single scale and so are the 8th and 9th, thus giving a total count of 8). Two pairs of chin shields, the posterior slightly the longer. Anterior pair touching each other, but separated from the triangular mental by the first lower labials. Posterior pair separated by the width of one small scale anteriorly; divergent and separated by the width of three scales posteriorly. Five labials in contact with the anterior chin shields on the left side and four on the right. Dorsal scale rows 19-17, the reduction taking place by the loss of the 4th row of scales at a point above the 80th ventral on the left side of the body and above the 78th ventral on the right. All rows keeled. Ventrals 152, plus an undivided anal plate; subcaudals 72 pairs; tail terminated by a short, fairly sharp tip. Color pattern consisting of three light longitudinal stripes on a dark ground color, the middorsal much more distinct than the laterals. Each lateral stripe occupies the 2nd and 3rd rows of dorsal scales; the central stripe involves the middorsal and approximately the median half of each of the adjacent scale rows. The central stripe narrows on the head and extends forward nearly to the suture between the parietals. Coloration (in spirits): stripes yellowish grey; ground color dark olive brown. A double row of poorly-defined dark spots between the stripes on both sides of the body, the spots being outlined, in part, by small bluish white dashes on the skin between the scales. A few small black maculations invade the lateral stripes. Area below lateral stripes only slightly darker than the stripes themselves and extending onto the lateral tips of the ventrals; a number of small black maculations in this area, but confined chiefly to the edges of some of the scales. Top of head olive; only a very slight suggestion of paired light parietal spots. A black line bordering part of the posterior edge of the 5th upper labial; upper labials yellowish,

with a brownish tinge in the region of the snout and becoming pale bluish green toward the rear of the mouth. Lower labials, chin, and throat yellow and unmarked. Belly greenish to bluish grey; a black spot (sometimes two) near the lateral edge of each ventral and so situated as to be clearly visible only when the ventral scutes are stretched apart. Under side of tail similar to belly anteriorly, but becoming virtually plain yellow on its terminal half.

- 2. Locality of Neotype: "Quebec, Quebec County, Province of Quebec, Canada", collected in 1942 by G. M. Bureau.
- 3. Reference Number allotted to Neotype: The neotype here designated forms part of the collection of the Chicago Natural History Museum and has been allotted the Registered Number 73660. (This specimen was formerly in the collection of the Royal Ontario Museum of Zoology and Palaeontology where it bore the Registered Number 7167.)
- **4. Figure of Neotype:** Opinions and Declarations of the International Commission on Zoological Nomenclature **12:** pl. 1.

## ANNEXE 2

Description of Neotype of "Coluber saurita" Linnaeus, 1766 ("Thamnophis sauritus sauritus" (Linnaeus, 1766)), the Eastern Ribbon Snake of North America

**Description:** An adult female with a total length of 590 mm.; tail length 202 mm.; tail 34 per cent. of total length. Rostral rounded and grooved below for the passage of the tongue. Paired internasals and prefrontals. Frontal considerably longer than wide. Parietals paired, each considerably larger than the frontal.